

Decision Memo

Musser Homestead Fuels Reduction Project

USDA Forest Service
Trinity River Management Unit
Trinity County, California
Township 34N, Range 9W, Sections 29 and 32. Mount Diablo Meridian

Background and Need for Action

This memo serves as the decision document for the Musser Homestead Fuels Reduction Project (project). The project area lies approximately one mile north of Weaverville, California (see project map on page 9). There is currently a high load of dead and downed material, both natural and activity created¹, in excess of 35 tons per acre within the project area. This project would create an area that increases suppression capability and protects infrastructure within the Wildland Urban Interface² (WUI) and well as reducing the potential for fire to escape from private lands onto National Forest System lands.

As a direct result of fire exclusion, the project area has been subjected to native conifer encroachment. Thickets of Douglas-fir and incense cedar growing in the understory has resulted in an accelerated mortality of the larger, more fire resistant conifers such as ponderosa pine, which is characteristically dominant in this area. Dense trees and continuous fuel loadings will continue to increase the potential fire behavior in the project area.

There is a need to reduce surface and ladder fuels³ in the project area that lend to high intensity fire (measured by flame lengths and crown fire potential). Project activities will meet this need by reducing potential fire behavior resulting in lower flame lengths (averaging 4 feet or less), and reduce the crown fire potential during 90th percentile weather conditions. There is also a need to improve the residual vegetation's growth and vigor. By reducing competition within the stand, remaining trees would be healthier since water, sunlight and nutrients would be more available, especially during drought conditions.

Decision

Based on my review of the environmental analysis prepared for this project by an interdisciplinary planning team, it is my decision to implement the proposed action on approximately 51 acres which includes:

- Cut conifers up to 10-inches dbh on a 20-30-foot spacing.
- Cut brush and small diameter trees from underneath the drip line of all leave trees.

¹ The Musser Hill Trail, which runs through the project area, was cleared of hazard trees in 2017, leaving a heavy fuel load from the downed hazard trees.

² The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

³ Vegetation that supports fire moving into the crowns of larger trees.

- **Thin hardwoods** up to 3-inches dbh on a 15 to 20-foot spacing favoring black oaks.
- Prune conifers and hardwoods up to seven feet leaving at least 50 percent tree crown.
- Limb and top felled tree boles. Buck into six to eight foot lengths and leave on the ground for permitted firewood collection where slope and access make it feasible.
- Fell hazard trees that pose a direct threat to the Weaver Basin Trail System.
- Fell hazard trees that have the potential to strike private property.
- Hand pile activity-slash and natural surface fuels to a pile size of approximately five feet in diameter and five feet high, and covered with appropriate slash cover material to keep piles dry.
- Hand piles will be placed intermittently throughout the planning area within openings and away from leave trees.
- Hand piles will be burned in the fall, winter, and spring months outside of limited operating periods (if applicable).
- Where desired and possible, activity-slash and natural surface fuels may be chipped. Any chip piles will be dispersed to a depth no greater than 3 inches.
- Repeated maintenance understory burning would occur on an interval that is conducive to a low-intensity/severity fire, similar to the pre-settlement fire regime⁴.

The following resource protection measures will be included in the implementation of the proposed action(s).

- A seasonal restriction (limited operating period, or LOP) will be imposed from February 1 through July 31 to prevent loud and continuous noise disturbance during the breeding season. Loud and continuous noise disturbance is defined as two hours or more at a given site (i.e. within a half-mile area) per day. Surveys can be used to generate new breeding activity results. If subsequent protocol compliant surveys show no nesting activity within 0.25 miles of proposed activities at the time of implementation, this LOP can be lifted.
- The Forest botanist, or other designee, will be notified prior to implementation of maintenance underburning activities so that populations of *Fritillary purdyi* can be flagged for avoidance. See maps in the project record for locations.
- The Forest botanist, or other designee, will be notified prior to project implementation so that populations of *Centaurea solstitialis* and *Elymus caput-medusae* can be flagged for avoidance from any machinery or other equipment. See maps in the project record for locations.
- Vegetation may be removed and fire lines or breaks may be constructed within heritage sites using hand tools, so long as ground disturbance is minimized and features are avoided.
- Trees which may impact at risk historic properties should they fall on site features and smolder can be directionally felled away from properties prior to ignition, or prevented from burning by wrapping in fire shelter fabric or treating with fire retardant or wetting agents.

⁴ The pre-settlement fire regime occurred prior to the fire suppression era which took effect sometime after the Forest Reserve System was established in 1905. (Sugihara Neil G., Jan W. Van Watendonk, Kevin E. Shaffer, Joann Fites-Kaufman, Thode, Andrea E., 2006. Fire in California's Ecosystem. University of California Press, Berkeley, and Los Angeles, California).

- Vegetation to be burned shall not be piled within the boundaries of historic properties unless the location (e.g., a previously disturbed area) has been specifically approved by the Forest's Heritage Program Manager or designee.
- Woody material may be chipped within the boundaries of historic properties so long as the staging of chipping equipment on-site does not affect historic properties.
- If new cultural resources are discovered during implementation all work in the vicinity should cease until the District Archaeologist examines and assesses the resource.
- Signs and personnel will be placed along the Musser Hill trail during implementation in order to provide for public safety.

The following BMPs must be implemented to control sedimentation.

- Conduct operations reasonably to minimize soil erosion.
- Do not operate chipping equipment when ground conditions are such that excessive damage will result.
- Control overland runoff.
- Maintain erosion controls in functional condition, especially during precipitation events and prior to forecasted storms.
- Utilize chipping and lop and scatter to provide ground cover where practicable to slow runoff, improve infiltration, and capture sediment.

Activities within a Riparian Reserve should be conducted in a manner that maintains or improves riparian and aquatic values. For this project the Riparian Reserve and Equipment Exclusion Zone (EEZ) widths for each stream category are, 300 feet for the fish-bearing stream (East Weaver Creek) and 100 feet for the intermittent stream (unnamed tributary to East Weaver Creek).

- Hand pile and burn outside the Riparian Reserve of any stream channel.
- Hazard trees within the Riparian Reserve will be felled and left on site unless this results in excessive fuel loading.
- Hand piles of thinned fuels will be placed in a checkerboard pattern whenever possible.
- Do not operate mechanized equipment in the Riparian Reserves.
- Do not operate mechanized equipment on slopes >35%.
- Avoid piling and burning at the bottom of swales.
- Maintain sufficient ground cover to encourage infiltration, avoid or minimize erosion, and to filter sediment.
- Mark the boundaries of the Riparian Reserve and EEZs on the ground before land disturbing activities.
- Alter prescribed fire prescriptions and control actions in the Riparian Reserve as needed to maintain ecosystem structure, function, and processes and onsite and downstream water quality.
- Avoid or minimize complete removal of the organic layer when burning in riparian areas or wetlands to maintain soil productivity, infiltration capacity, and nutrient retention.
- Set target levels for desired ground cover remaining after burning based on slope, soil type, and risk of soil and hillslope movement.
- Plan burn areas to use natural or in-place barriers that reduce or limit fire spread, such as low fuel hazard areas, streams, or wetland features to minimize the need for fire line construction.

related to wildlife, and there would be no effect to any wildlife species listed under the federal Endangered Species Act. My rationale for this determination and finding is based on the following:

- Field reviews⁶ reveal that areas proposed for treatment do not include suitable habitat associated with any wildlife species listed under the federal Endangered Species Act⁷.
- The areas proposed for treatment do not include Designated Critical Habitat for any wildlife species listed under the federal Endangered Species Act.
- A seasonal restriction will be imposed from February 1 through July 31 to prevent loud and continuous noise disturbance during the breeding season. Loud and continuous noise disturbance is defined as two hours or more at a given site (i.e. within a half-mile area) per day. Surveys can be used to generate new breeding activity results. If subsequent protocol compliant surveys show no nesting activity within 0.25 miles of proposed activities at the time of implementation, this LOP can be lifted.
- Areas proposed for treatment do not lie in proximity to streams where aquatic habitat would potentially be affected.
- Prior to or during implementation, if new information from the State or other verified sources shows there are reproducing wolves within five miles of project activities, the Forest will contact the US Fish and Wildlife Service for technical assistance and discuss the need for consultation. This development is improbable.

Aquatic:

William Brock (November 5, 2018). Forest Fish Program Manager, Shasta-Trinity National Forest.

The Project was assessed for potential effects to the habitat indicators listed in Table 1 below. See the Analytical Process Guidance document (AP, 2004) for a description of each indicator. The only indicators listed in Table 1 that could conceivably be affected during and after and/or directly or indirectly by project implementation, would be Suspended Sediment/Turbidity and Substrate/Embeddedness. But this potential will be reduced or eliminated by resource protection measures (RPMs) incorporated into the Project implementation along with best management practices (BMPs) applicable to the Project (see resource protection measures listed above).

Table 1. Effects to Habitat Indicators by the Musser Fuels Project to SONCC Coho Salmon and their Critical Habitat

Indicator	Musser Homestead Fuels Reduction Project
Temperature	0
Suspended Sediment / Turbidity	0

⁶ A habitat field review of the project area was conducted by Mark Goldsmith (Wildlife Biologist, Shasta-Trinity National Forest) on August 14, 2018.

⁷ The Federally Listed gray wolf is a habitat generalist but is not known or expected to occur in the project vicinity.

- Conduct prescribed fires to minimize the residence time on the soil while meeting the burn objectives.
- Construct fire line to the minimum size and standard necessary to contain the prescribed fire and meet overall project objectives.
- Rehabilitate or otherwise stabilize fire line in areas that pose a risk to water quality.
- Alter prescribed fire prescriptions and control actions in the Riparian Reserve as needed to maintain ecosystem structure, function, and processes and onsite and downstream water quality.
- Avoid or minimize complete removal of the organic layer when burning in riparian areas or wetlands to maintain soil productivity, infiltration capacity, and nutrient retention.

Rationale for a Categorical Exclusion

I have determined that this action fits into a category of actions that area categorically excluded from documentation in an environmental impact statement or an environmental assessment because of the limited context of 51 acres, and the low intensity of the actions which falls small trees and shrubs with minimal changes in forest cover. The category of exclusion is described in the code of Federal Regulations as 36 CFR 220.6(e)(6): Timber and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction.

The project area is completely within the Matrix, Roded Recreation land allocation of the Shasta-Trinity Land and Resource Management Plan (LRMP)⁵. Standards and guidelines of this land allocation include; “maintain an average on 10 tons of unburned dead/downed material per acre on slopes less than 40 percent. Preference is to have a portion of this tonnage in large material (i.e., 4 to 6 logs over 10 feet long at the largest diameter available). Where feasible, maintain the same amount on slopes over 40 percent” (LRMP, pg. 4-65).

I have reviewed the resource conditions pertaining to extraordinary circumstances and have determined that no extraordinary circumstances exist that would preclude the use of a categorical exclusion in accordance with Council on Environmental Quality regulations at 40 CFR 1508.4. The interdisciplinary effects analysis in the project record shows that the project, as designed, will have no extraordinary circumstances related to the project. My conclusion is based on a review of the project record that shows a thorough analysis using the best available science. Resource conditions that were considered in determining whether extraordinary circumstances exist are as follows:

- 1) Federally listed threatened and endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species.

Wildlife
Thomas A. Quinn (October 4, 2018) and Mark Goldsmith (February 12, 2019). Wildlife Biologist(s), Trinity River Management Unit, Shasta-Trinity National Forest Service.

The Musser Homestead Fuels Project would not involve any extraordinary circumstances

⁵ USDA, 1994.

Chemical Contamination / Nutrients	0
Physical Barriers	0
Substrates / Embeddedness	0
Large Woody Debris	0
Pool Frequency and Quality	0
Large Pools	0
Off-channel Habitat	0
Refugia	0
Average Wetted Width / Maximum Depth pools	0
Streambank Condition	0
Floodplain Connectivity	0
Peak/Base Flows	0
Drainage Network	0
Road Density/Location	0
Disturbance History	0
Riparian Reserves	0

Note: 0= Neutral or No Effect

There will be no direct or indirect effects to the fish or fish habitats. A trend toward Endangered Species Act (ESA) listing or loss of viability of the three Forest Service Sensitive Species listed on the USFS Regional Sensitive Species List for the Shasta Trinity National Forest is not anticipated and viability is not at risk. Implementation of the Project will not prevent attainment of the Aquatic Conservation Strategy Objectives (NWFP ROD 1994) as per the Hydrology Review Project File Memo and the evidence presented above.

Botanical:
Lusetta Sims (September 11, 2018). Botanist, Trinity River Management Unit, Shasta-Trinity National Forest Service.

The Musser Homestead Fuels Project would have no effect on, or involve any extraordinary circumstances related to Federally listed Threatened, Endangered, Proposed species or Forest Service Sensitive Species (collectively referred to as TES species). There are no known occurrences of, or habitat for any Federally TES or Forest Sensitive species.

- 2) Flood plains, wetlands, or municipal watersheds.
Galen Anderson (November 2018). West Zone Hydrologist, Shasta-Trinity National Forest.

Flood Plains are not currently mapped by the Federal Emergency Management Agency for this area. Flood plains may exist along East Weaver Creek and in an unnamed

intermittent tributary at the north end of the project area and are likely coincident with the Riparian Reserves. The National Wetlands Inventory has mapped an unnamed intermittent creek at the north end of the project area as a riverine wetland as well as East Weaver Creek. East Weaver Creek is the source of a portion of the Weaverville municipal water supply and there are numerous landowners that also use this creek for domestic water uses.

This project will have a negligible effect on water quality as long as no equipment use (chipping) or burning occurs in the Riparian Reserve. Protecting the Riparian Reserve areas will concurrently protect the flood plains and wetlands and ensure minimal impact to water quality. Sedimentation caused by this activity will be insignificant with BMP implementation and will not negatively affect municipal watersheds. Thus, no extraordinary circumstances are foreseen as a result of this fuels reduction project.

- 3) Congressional designated areas, such as wilderness, wilderness study areas, or Natural Recreation Areas.
- 4) Inventoried Roadless Areas.
- 5) Research Natural Areas.

There are no wilderness, wilderness study areas, Natural Recreation Areas, Inventoried Roadless Areas or Research Natural Areas within the project area.

- 6) American Indian religious or cultural sites; and
- 7) Archaeological sites, of historical properties or areas

Pursuant to the Programmatic Agreement among the U.S.D.A Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Processes for Compliance with Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region (PA), the Heritage Program Manager concurs with the recommendation of the staff archaeologist that the undertaking be viewed as resulting in No Adverse Effect, and that NHPA compliance be met under Stipulation 7.8(a).

Public Involvement

This project was originally listed as a proposal on the Shasta-Trinity National Forest Schedule of Proposed Actions (SOPA) and updated periodically during the analysis. Scoping to interested and affected parties was initiated in October 2018. The project was also discussed at a public Weaverville Community Forest Steering Committee meeting on September 21, 2018 and a Trinity County Fire Safe Council meeting on May 24, 2018. Two comment letters were submitted during the scoping period. Questions and/or comments from those letters were addressed in the *Rationale for a Categorical Exclusion* and *Wildlife* sections above.

Findings Required by Other Laws

This decision is consistent with the Shasta-Trinity National Forest Land Resource Management Plan (Forest Plan) as required by the 1982 regulations of the National Forest Management Act.

National Forest Management Act

My decision is consistent with the Forest Plan as required by the National Forest Management Act (NFMA). The project was designed in conformance with Forest Plan standards and incorporates the appropriate Forest Plan guidelines. The NFMA requires projects to be consistent with minimum specific management requirements as provided in the implementing regulations at 36 CFR 219.12 and described in the Forest Service Manual 1921.12a. I find the proposed action to be consistent with the provisions of the NFMA.

Executive Order 13112, Invasive Species

The project is consistent with EO 13112. To minimize future introduction and spread of invasive, non-native plant species, incorporation of resource protection measures will be adopted as part of the proposed action.

Other Laws and Requirements

The Endangered Species Act, National Historic Preservation Act, EO 11988 Floodplain Management, and EO 11990 Protection of Wetlands are summarized in the 'Rationale for a Categorical Exclusion' section above and discussed in more detail in the respective resource reports found in the project record.

Implementation


The action will be implemented in 2019.

Administrative Review (Objection) Opportunities

This decision is not subject to administrative review (objection) pursuant to 36 CFR 218.1.

Contact

For additional information contact: Stephanie Riess (Environmental Coordinator), Trinity River Management Unit, 360 Main Street, Weaverville, CA. 530-623-1755. More information can also be found on the project's website, <https://www.fs.usda.gov/project/?project=54335>.


Joe D. Smailes
District Ranger Trinity River Management Unit

03/04/2019
Date

Musser Homestead Fuels Reduction

